

**Notice of Allowability**

Application No.

10/510,513

Examiner

Fred M. Teskin

Applicant(s)

TAGUCHI ET AL.

Art Unit

1713

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to AMENDMENT OF SEPTEMBER 21, 2005.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 081205
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### **Reasons for Allowance**

The following is an examiner's statement of reasons for allowance:

Claims 1-13 are allowable over the closest prior art, of which WO '635, cited in the International Search Report of 15 July 2003, is representative.

WO '635 discloses polycyclic polymers with acid labile pendant groups, obtained by polymerizing norbornene monomer substituted with such groups at, e.g., the 5- and/or 6- positions. Examples 1-10 and 18 employ norbornene monomers with exo, endo stereochemistry, but none of these monomers conforms to claim formulae (1) and (5), particularly with respect to the definitions of  $R^2$ ,  $R^3$  and  $R^4$  recited in claims 1 and 6. Furthermore, in these examples the monomers are polymerized using catalysts that the reference characterizes as producing *addition* polymers (page 30, ll. 16+), rather than a *ring-opened* polymer as here claimed. And while ring-opening metathesis polymerization of norbornene monomer is reported in other examples, such as Examples 28-37 and 39, the norbornene monomers used in these polymerizations still do not satisfy the claim definitions for  $R^2$ ,  $R^3$  and  $R^4$ , and their stereochemistry at the 5,6-positions is not identified.

Moreover, applicants' specification presents comparative experiments (Ex. 5 and Comp. Ex. 2) demonstrating that a 5-endo-6-exo-dicarboxy-2-norbornene monomer [corresponding to claim formula (5)] produces ring-opened polymer at a much higher yield (97 % vs. 46 %) than the corresponding endo, endo isomer and with the same composition ratio as the monomer charge: 50/50, as opposed to 21/79 for the comparative polymer, based on the same charge ratio (50/50 mol/mol).

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Since neither WO '635 nor any other prior art of record recognizes any benefit in selecting one isomeric configuration over the other, e.g, exo/endo vs. endo/endo, the demonstrated improvements in yield and uniformity of composition ratio for a norbornene ring-opened polymer according to the present invention are deemed probative of unobviousness.

Accordingly, claims 1-13 are deemed to define allowable subject matter and passed to issue.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**FRED TESKIN**  
**PRIMARY EXAMINER**  
*1713*

FMTeskin/09-27-05